

CLAIMS

What is claimed is:

1. A damper comprising:
 - a pressure tube defining a working chamber;
 - a piston disposed within said working chamber, said piston dividing said working chamber into a lower working chamber and an upper working chamber;
 - a piston rod attached to said piston, said piston rod extending through one of said upper and lower working chambers, said piston rod defining a cavity; and
 - a compensator disposed within said cavity, said compensator being stationary with respect to said pressure tube.
2. The damper according to Claim 1, further comprising a connecting rod extending between said compensator and said pressure tube.
3. The damper according to Claim 2, wherein said pressure tube includes an end cap, said connecting rod being attached to said end cap.
4. The damper according to Claim 1, wherein said compensator sealingly engages said piston rod.

5. The damper according to Claim 1, wherein said piston rod defines a vent hole extending between said cavity and an environment surrounding said damper.

6. The damper according to Claim 5, wherein said compensator sealingly engages said piston rod.

7. The damper according to Claim 1, wherein said compensator is in communication with the other of said upper and lower working chambers.

8. The damper according to Claim 7, wherein said piston rod defines a vent hole extending between said cavity and an environment surrounding said damper.

9. The damper according to Claim 8, wherein said compensator sealingly engages said piston rod.

10. The damper according to Claim 1, further comprising a flow path extending through said piston to provide communication between said upper and lower working chambers.

11. The damper according to Claim 10, further comprising a compression valve assembly attached to said piston, said compression valve

assembly prohibiting fluid flow from said upper working chamber to said lower working chamber.

12. The damper according to Claim 11, further comprising an extension valve assembly attached to said piston, said extension valve assembly prohibiting fluid flow from said lower working chamber to said upper working chamber.

13. The damper according to Claim 10, wherein said flow path is an open flow path.

14. A damper comprising:

- a pressure tube defining a working chamber;
- a piston disposed within said working chamber, said piston dividing said working chamber into a lower working chamber and an upper working chamber;
- a piston rod attached to said piston, said piston rod defining a cavity;
- a compensator disposed within said cavity and sealingly engaging said piston rod; and
- a connecting rod extending between said compensator and said pressure tube.

15. The damper according to Claim 14, wherein said pressure tube includes an end cap, said connecting rod being attached to said end cap.

16. The damper according to Claim 14, further comprising a flow path extending through said piston to provide communication between said upper and lower working chambers.

17. The damper according to Claim 16, further comprising a compression valve assembly attached to said piston, said compression valve assembly prohibiting fluid flow from said upper working chamber to said lower working chamber.

18. The damper according to Claim 17, further comprising an extension valve assembly attached to said piston, said extension valve assembly prohibiting fluid flow from said lower working chamber to said upper working chamber.

19. The damper according to Claim 16, wherein said flow path is an open flow path.

20. The damper according to Claim 14 wherein said piston rod defines a vent hole in communication with said cavity.

21. A damper comprising:
- a pressure tube defining a working chamber filled with a compressed fluid;
 - a piston disposed within said working chamber, said piston defining a piston surface area defined by the outer circumference of said piston, said piston dividing said working chamber into an upper working chamber and a lower working chamber filled with said compressed fluid; and
 - a piston rod attached to said piston, said piston rod extending through one of said upper and lower working chambers;
- wherein a surface area of said piston exposed to said compressed fluid in the other of said upper and lower working chambers is less than said piston surface area.